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EXAMINER

JACKSON, MONIQUE R

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 04/30/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,110

Applicant(s)

JUD ET AL.

Examiner

Monique R Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/457,006.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. The terminal disclaimer filed on 1/30/03 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 09/505,713 has been reviewed and is accepted. The terminal disclaimer has been recorded.
2. The provisional double patenting rejection over co-pending application 09/505,713 has been obviated by the proper filing of a terminal disclaimer and hence the double patenting rejection has been withdrawn.
3. The amendment filed 1/30/03 has been entered. Claims 11-29 have been canceled. New claims 30-48 have been added. Claims 30-48 are pending in the application. The substitute specification filed 2/13/03 has been received and entered.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 31-33, 35-37, and 46-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 31-33, 35-37 and 46-48 recite the limitation "the first plastic film that is a polyester", "the polyester film", "the polyester" or "the first functional layer (a), is a polyester". However, there is insufficient antecedent basis for this limitation in the claim considering that the above recited claims depend on independent Claim 30 which recites "(a) a first functional layer containing a first plastic film that is a polyolefin or an extrusion layer of a polyolefin or one or more lacquer layers, or print and lacquer layers, or print layers;" but does not recite that the first plastic film is a polyester film as recited in prior Claim 11 which has now

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been cancelled. Hence, it is unclear whether the polyester film is in addition to the first functional layer recited in Claim 30 or in place of this layer, or incorporated into the film in another manner and therefore one having ordinary skill in the art would not be reasonably apprised of the scope of the claimed invention and could not interpret the metes and bounds of the claim so as to understand how to avoid infringement.

Claim Rejections - 35 USC § 102

6. Claims 30, 34, and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Migliorini et al (USPN 5,591,520.) Migliorini et al teach a high barrier metallized film with excellent bonds strengths comprising a coextruded multilayer film of a layer of polyamide (PA) adjacent and aggressively adhered to a layer of polypropylene (PP), and optionally a heat seal layer, such as ethylene propylene (EP) or ethylene propylene butene (EPB), applied on the polypropylene layer opposite the polyamide layer, and a metal layer such as aluminum applied to the polyamide surface wherein the metallized film may be subsequently extrusion laminated on the metal surface with a low density polyethylene film (LDPE) (*meets the limitation "first functional layer containing a first plastic film that is a polyolefin or extrusion layer of a polyolefin or one or more lacquer layers"*), such that the structure of the resulting film is: LDPE/metal/PA/PP/EP or EPB (Abstract; Col. 1, lines 10-64; Col. 2, lines 39-42; Col. 3, line 58-Col. 4, line 14; Example) wherein the Examiner takes the position that the polyamide/polypropylene film taught by Migliorini would inherently meet the instant limitation with regards to delamination during sterilization given that the film is formed by coextrusion as instantly claimed and wherein the aluminum layer taught by Migliorini et al reads on the term

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“aluminum foil” considering the above claims have not limited the term to a particular aluminum layer thickness.

7. Claims 30, 34, and 38-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Breitler et al (USPN 5,589,275) for the reasons recited in the prior office action and restated below.

Breitler et al teach a composite material suitable for sterilization containers or packages wherein the composite contains a metal layer on both sides of which is a plastic layer wherein the metal layer is a metal foil, preferably aluminum or aluminum alloy with an aluminum purity of most preferably 99.5% or higher, including AA8014, AA8079 or AA8101, having a thickness of 8-120 μ m; wherein the plastic layer(s) is a polyamide-based thermoplastic containing polyamide with a thickness of 20-50 μ m (Abstract; Col. 1, lines 19-20; Col. 3, lines 1-22 and lines 66-67.) Breitler et al teach that the plastic layers on both sides of the metal layer may include composites of two or more films or layers wherein the polyamide-based thermoplastic layers may additionally and independent of each other be provided with an outer lying sealable layer and/or barrier layer of thermoplastics, such as a polypropylene sealable layer, wherein the sealable layers are sealable films deposited via adhesives, applied by lamination or lamination coating wherein the thickness of the sealable films may be 6-100 μ m thick and furthermore, one or more layers, e.g. 1 to 10 μ m thick, of a sealing layer coating may be deposited on the plastic composite (Col. 4, lines 1-38.) Breitler et al further teach that a single or double-sided sealable composite may be obtained by single or double-sided coextrusion of the plastic layers, wherein in that connection, it is useful for the plastic layers to contain or comprise a polyamide-based thermoplastic and at least one polyamide layer to feature a sealing layer on at least one side, i.e.

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each layer of polyamide thermoplastic may be covered with a sealable layer, such as polypropylene, on one side or both sides, independent of the other layers (Col. 4, lines 36-45.) Breiter et al teach that to join the aluminum foil or to bond the plastic films or individual layers to each other, an adhesive coating and/or bonding primer are usually employed wherein a suitable adhesive is a maleic-anhydride modified polypropylene, and suitable bonding agents are epoxy or urethanes, wherein the bonding agent or primer may be for example applied in amounts of 0.1-10g/m², usefully 0.8-6g/m² or the adhesive layer has a thickness of 1-12μm or applied in an amount of 0.1-14 g/m² (Col. 5, lines 3-47.) Breitler et al further teach that the composite material may also feature a sealing layer such as PET on one or both sides of the composite independent of the other layers, with a thickness of 6-100μm (Col. 4, lines 20-35.) Breitler et al teach a number of layer arrangements wherein the plastic films may be formed by warm coating or coextrusion and may be subjected to stretch-drawing, to produce a composite film useful in manufacturing packaging and parts of packaging such as packaging containers, base parts, blister packs, for storing or packaging foodstuffs or pharmaceutical products (Col. 5, line 48-Col. 6, line 23; Col. 6, line 65-Col. 7, line 33.) With regards to the limitation “lacquer”, the examiner takes the position that the synthetic coating layers taught by Breitler et al read on the term “lacquer” layer(s). Hence, according to a broad interpretation of Breitler et al, the composite may have the following structure: coextruded (PP/PA/PP)/optional primer or adhesive/metal foil/optional primer or adhesive/coextruded (PP/PA/PP) which reads on the above recited claims given that a polypropylene layer which is a polyolefin may be adjacent the metal foil directly or via a primer or adhesive and given that the instant claims do not exclude the incorporation of additional layers.

Claim Rejections - 35 USC § 103

8. Claims 30, 34, and 38-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Migliorini et al (USPN 5,591,520) in view of Breitler et al. The teachings of Migliorini et al are discussed above. Though Migliorini et al teach that the composite comprises a metal or aluminum layer formed by metallization, Migliorini et al does not teach that the metal layer is formed by a metal foil or aluminum foil having the instantly claimed properties. However, Migliorini et al do teach that a metallized layer is functional equivalent to a metal foil layer in terms of providing barrier properties in a multilayer composite film wherein the metal layer thickness affects the barrier properties of the film, hence based on the teachings of Migliorini et al, one having ordinary skill in the art at the time of the invention would have been motivated to utilize a metal or aluminum foil layer in the invention taught by Migliorini et al based on the desired barrier properties for a particular end use of the packaging film. Further, one having ordinary skill in the art would have been motivated to utilize any conventional metal foil or aluminum foil layer utilized in the art wherein Breitler et al teach the use of an aluminum foil layer having the instantly claimed properties in a composite barrier packaging film and hence, one skilled in the art would have been motivated to utilize the preferred metal foil taught by Breitler et al in the composite barrier film taught by Migliorini et al.

9. Claims 30, 34, and 38-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breitler et al in view of *Ullmann's Encyclopedia of Industrial Chemistry*, vol. A11, for the reasons recited in the prior office action and restated below.

The teachings of Breitler et al are discussed above. Breitler et al teach a composite film containing a metal foil, particularly aluminum, with plastic films on both sides thereof wherein

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the plastic films may be multilayer films formed from various layer structures and specifically teach the general layer structure as instantly claimed with layer thickness within or comprising the instantly claimed ranges utilizing optional adhesive, bonding and/or primer layers to bond plastic layers to each other and/or to the metal foil as instantly claimed wherein the plastic films may be extruded, coextruded, or laminated via adhesive. Though Breitler et al disclose all of the layers, layer materials and layer thickness as instantly claimed, Breitler et al does not specifically limit the invention to the specific composite film combination as instantly claimed, however, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any of the structures disclosed by Breitler et al selecting from the disclosed materials taught by Breitler et al based on the desired film properties for a particular end use, and further to utilize routine experimentation to determine the optimum thickness of the individual layers given that layer thickness is a result-effective variable affecting the barrier, mechanical, adhesion and sealing properties of the resulting composite based on the desired end use of the packaging composite taught by Breitler et al. Further, it would have been obvious to one having ordinary skill in the art to determine the appropriate laminating method, such as extrusion laminating, lamination coating, coextrusion or laminating via adhesives as taught by Breitler et al, to produce the multilayer plastic films based on the individual layer materials to be laminated wherein laminating via adhesives, extrusion coating and coextrusion are conventional methods of producing composite plastic films as evidenced by Ullman's which specifically teach that coextrusion is unique in that it can produce very thin multilayer films and that polyamide films are mainly employed in composite structures produced by lamination, extrusion coating, or coextrusion with sealing or barrier resins (6.7 Polyamide, page 105.) Ullman's also teach that

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composite films are conventionally utilized in the packaging industry to produce various packaging structures such as bags, sacks, and blister or cushion packs, or thermoformed structures such as containers from thicker films, wherein the combination of plastic films with aluminum foil produces semirigid composites with exceptionally low permeability to gases, water vapor and odors (6.13 Composite Films, 7. Summary of Uses, pages 108-109.)

10. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Breitler et al in view of Abrams (USPN 6,090,471) for the reasons recited in the prior office action and restated below.

Though Breitler et al teach that the composite is useful for producing packaging materials, Breitler et al do not teach that the composite further comprises a print layer or a print layer with a lacquer overcoat. However, it is well known in the art, as taught by Abrams, that a sterilizable packaging composite can comprise a print layer to provide desired product information for a particular packaging end use and that a protective overcoat or lacquer layer can be provided over the print layer to protect the print layer during sterilization. Therefore, one having ordinary skill in the art at the time of the invention would have been motivated to include a print layer on the composite taught by Breitler et al to provide desired product information or decorative properties, wherein the print layer is further provided with a protective overcoat layer to protect the print layer during sterilization as taught by Abrams.

11. Claims 30-38 and 43-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtsuki et al (USPN 4,407,689.) Ohtsuki et al teach a laminated member comprising a metal foil laminated to a thermoplastic film via a polyolefin-based adhesive wherein the metal foil is made of aluminum with a thickness of about 5 to 1,000um, may be subjected to chemical

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treatment (primer) on the surface of the metal foil, and may be backed with a heat-resistant film such as a polyamide or polyester film (*also reads on term "lacquer layer"*) since the metal foil is generally low in mechanical strength, wherein a print layer may be formed between the heat-resistant layer and the aluminum foil (Abstract; Col. 2, line 25-Col. 4.) Ohtsuki et al teach that the thermoplastic film may be a single resin film, for example, polyolefin such as polyethylene or polypropylene, polyamide, polyester, polyvinyl chloride, polyvinylidene chloride, polybutadiene, polycarbonate, an ethylene-vinyl acetate, or polyvinyl alcohol or a composite film produced therefrom by coextrusion (Col. 3, lines 20-32.) Ohtsuki et al further teach that the laminated product may be used for the production of a retort sterilization package wherein when it is used as a material for packaging food to be sterilized in a retort, it is preferred to use high density polyethylene or polypropylene as the polyolefin (Col. 5, lines 22-27.) Hence, Ohtsuki et al teach a composite having the following structure: polyester/print layer/primer/aluminum foil/primer/polyolefin adhesive/thermoplastic film wherein the teachings of Ohtsuki et al suggest that the thermoplastic film may be a coextruded film of two different polymers such as polypropylene and polyamide (Col. 3, lines 20-32; Col. 39-42) and therefore one skilled in the art at the time of the invention would have been motivated to utilize a coextruded film of any two polymers disclosed by Ohtsuki et al including polypropylene and polyamide. With regards to Claim 32, though Ohtsuki et al teach that the polyester backing film is present to provide improved mechanical strength, Ohtsuki et al does not specifically teach that the polyester film is monoaxially or biaxially oriented or that the polyester is formed from PET or PPT. However, it is well known and conventional in the art to orient a polymer film mono- or bi-axially to improve the mechanical strength of the film hence given that Ohtsuki et al teach that the polyester film is

provided because the metal foil lacks mechanical strength, one having ordinary skill in the art at the time of the invention would have been motivated to improve the mechanical strength of the polyester film and resulting resin backed metal foil by orienting the polyester film as well known and conventional in the art. Further, one having ordinary skill in the art at the time of the invention would have been motivated to utilize any polyester film conventionally utilized in producing packaging composite materials wherein PET and PPT are obvious species of polyester film utilized in the art to provide mechanical strength to a composite film.

12. Claims 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtsuki et al in view of Breitler et al. The teachings of Ohtsuki et al are discussed above. Though Ohtsuki teach that the metal foil may be an aluminum foil, Ohtsuki et al does not specifically teach that the aluminum foil has the properties as instantly claimed. However, one having ordinary skill in the art would have been motivated to utilize any conventional aluminum foil utilized in the art wherein Breitler et al teach the use of an aluminum foil layer having the instantly claimed properties in a composite barrier packaging film and hence, one skilled in the art would have been motivated to utilize the preferred aluminum foil taught by Breitler et al in the composite barrier film taught by Ohtsuki et al.

13. Claims 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtsuki et al in view of Abrams. The teachings of Ohtuski et al are discussed above. Though Ohtsuki et al teach that the aluminum foil layer may comprise a print layer and a polyester or polyamide overcoat or backing film, Ohtsuki et al does not teach that the print layer is provided on the polyester backing film and then an overcoat layer is provided on the print layer. However, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any

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combination of print and polyester layers wherein Abrams teaches that a sterilizable packaging composite can comprise a print layer to provide desired product information for a particular packaging end use and that a protective overcoat or lacquer layer can be provided over the print layer to protect the print layer during sterilization. Therefore, one having ordinary skill in the art at the time of the invention would have been motivated to include a print layer on either side of the polyester film taught by Ohtsuki et al to provide desired product information or decorative properties, wherein the print layer is further provided with a protective overcoat layer to protect the print layer during sterilization as taught by Abrams.

Response to Arguments

14. Applicant's arguments filed 1/30/03 have been fully considered but they are not persuasive and/or moot in view of the new ground(s) of rejection. The Applicant argued that the Examiner's interpretation of Breitler et al is incorrect, that nowhere does Breitler et al disclose a polypropylene layer between the metal layer and the polyamide layer, and that the recitation at Col. 4 of Breitler et al only teaches polypropylene layers on the outer sides of the composite and not the outer sides of the polyamide layer and hence between the polyamide layer and the metal layer. However, the Examiner maintains her position with regards to Breitler et al and specifically points to lines 36 to 44 of Column 4 of Breitler which read:

“A single or double-sided sealable composite is obtained by single or **double sided coextrusion of the plastic layers with e.g. a polypropylene/polyethylene copolymer.**

In that connection it is useful for the plastic layers to contain or comprise of a polyamide-based thermoplastic to feature a sealing layer on at least one side i.e. **each layer of polyamide-**

based thermoplastic **may be covered with a sealable layer on one or both sides, independent of the other layers.**” (Emphasis added.)

This recitation clearly states that **each layer** of polyamide may be provided on **one or both sides** with a sealable layer, or polypropylene per Col. 4, line 24, independent of the other layers, **not** that each layer of polyamide may be provided **only on one side** with a sealable layer such that the composite is provided with an outerlying sealable layer on one or both sides as interpreted by the Applicant. Hence, the Examiner maintains her position that the invention taught by Breitler et al does in fact teach the instantly claimed invention having the structure polyamide plastic layer/metal layer/polyamide plastic layer wherein **each polyamide plastic layer** may be provided on one or both sides with a sealable polypropylene/polyethylene layer independent of other layers by coextrusion, hence resulting in pp/pa/pp/metal foil/pp/pa/pp, and further notes that her interpretation **is consistent** with what is understood in the packaging art, note specifically, the attached Muggli (USPN 5,968,663, commonly owned to Alusuisse Technology & Management) which also utilizes the same language as the commonly assigned Breitler et al and further exemplifies polyethylene/polypropylene “sealable layers” (c, c¹, e and e¹) on both sides of the plastic layers (d and d¹), which are present on both sides of a central metal layer (a) (Abstract; Col. 3, line 42-Col. 4, line 2; Col. 4, line 57-8.)

Further, a fair reading of Brietler et al by one having ordinary skill in the art would nevertheless lead one skilled in the art to the interpretation that a sealable or polypropylene layer can be provided on **either or both sides of each polyamide layer** independent of other layers. Hence, given that the description at Column 4, lines 36-44 can be interpreted both ways by one

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having ordinary skill in the art, the Examiner maintains her position that the Brietler et al reference serves as a teaching with regards to the instant invention.”

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 703-308-0428. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Monique R. Jackson
Primary Examiner
Technology Center 1700
April 25, 2003